WE CLAIM:

1. A method of producing a chimeric RNA molecule in a cell comprising: contacting a cell with a nucleic acid molecule recognized by nuclear splicing components wherein said nucleic acid molecule comprises:

a) one or more target binding domains that target binding of the nucleic acid molecule to a pre-mRNA expressed within the cell;

b) a 3' splice region comprising a branch point, a pyrimidine tract and a 3' splice acceptor site; and

c) a nucleotide sequence to be *trans*-spliced to the target pre-mRNA;

wherein said nucleic acid molecule is recognized by nuclear splicing components within the cell.

2. A method of producing a chimeric RNA molecule in a cell comprising: contacting a cell with a nucleic acid molecule recognized by nuclear splicing components wherein said nucleic acid molecule comprises:

a) one or more target binding domains that target binding of the nucleic acid molecule to a pre-mRNA expressed within the cell;

b) a 3' splice acceptor site; and

c) a nucleotide sequence to be *trans*-spliced to the target pre-mRNA;

wherein said nucleic acid molecule is recognized by nuclear splicing components within the cell.

3. A method of producing a chimeric RNA molecule in a cell comprising contacting a cell with a nucleic acid molecule recognized by nuclear splicing components wherein said nucleic acid molecule comprises:

a) one or more target binding domains that target binding of the nucleic acid molecule to a pre-mRNA expressed within the cell;

b) a 5' splice site; and

c) a nucleotide sequence to be *trans*-spliced to the target pre-mRNA;

wherein said nucleic acid molecule is recognized by nuclear splicing components within the cell.

4. The method of claim 1 wherein the nucleic acid molecule further comprises a 5' donor site.

5. The method of claim 1, 2, 3 or 4 wherein said nucleic acid molecule further comprising a spacer region that separates the 3' splice region from the target binding domain.

6. The method of claim 1, 2, 3, or 4 wherein said nucleic acid molecule further comprising a safety sequence comprising one or more complementary sequences that bind to one or both sides of the 3' splice site.

7. The method of claim 1, 2, 3, or 4 wherein binding of said nucleic acid

molecule binds to the target pre-mRNA is mediated by complementary, triple helix formation, or protein-nucleic acid interaction.

8. The method of claim 5 wherein binding of the nucleic acid molecule to the target pre-mRNA is mediated by complementary, triple helix formation, or protein-nucleic acid interaction.

9. The method of claim 6 wherein the binding of the nucleic acid molecule to the target pre-mRNA is mediated by complementary, triple helix formation, or protein-nucleic acid interaction.

10. The method of claim 1, 2, 3 or 4 wherein the nucleotide to be *trans*-spliced to the target pre-mRNA encodes a translatable polypeptide.

11. The method of claim 5 wherein the nucleotide to be *trans*-spliced to the target pre-mRNA encodes a translatable polypeptide.

12. The method of claim 6 wherein the nucleotide to be *trans*-spliced to the target pre-mRNA encodes a translatable polypeptide.

13. The method of claim 1, 2, 3 or 4 wherein the nucleotide sequence to be *trans*-spliced to the target pre-mRNA contains a nonsense mutation.

14. The method of claim 5 wherein the nucleotide sequence to be *trans*-spliced to the target pre-mRNA contains a nonsense mutation.

15. The method of claim 6 wherein the nucleotide sequence to be *trans*-spliced to the target pre-mRNA contains a nonsense mutation.

16. A method of producing a chimeric RNA molecule in a cell comprising: contacting a cell with a nucleic acid molecule recognized by nuclear splicing components wherein said nucleic acid molecule comprises:

a) one or more target binding domains that target binding of the nucleic acid molecule to a pre-mRNA expressed within the cell;

b) a 5' donor site;

c) 3' splice acceptor site; and

c) a nucleotide sequence to be *trans*-spliced to the target pre-mRNA;

wherein said nucleic acid molecule is recognized by nuclear splicing components within the cell.

17. The method of claim 16 wherein the nucleic acid molecule further comprises a spacer region that separates the 3' splice region from the target binding domain.

18. The method of claim 16 further comprising a safety sequence comprising one or more complementary sequences that bind one of both sides of the 3' splice site.